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MONTHLY LETTER OF THE BUREAU OF ENTOMOLOGY  
UNITED STATES DEPARTMENT OF AGRICULTURE.

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HAVE YOU BOUGHT THAT LIBERTY BOND?

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"And he smote thrice and stayed. And the prophet was wroth with him ..."

Buy A Bond And Give The Fourth Smite!

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HAROLD OSCAR MARSH.

Harold O. Marsh died at his home, Chester, N. J., September 10, 1918. He was born November 6, 1885, and prior to his employment in the Federal Bureau of Entomology was engaged under the direction of the State Entomologist of New Jersey, and later by the State Zoologist of Pennsylvania at Harrisburg.

Mr. Marsh was engaged as a truck-crop insect investigator for a period of ten years and during that time was the author of a considerable number of bulletins. He was a hard and conscientious worker and was particularly expert in investigations of life histories, in obtaining all stages of the insects on which he worked, and in determining the periods and the number of generations. He was also skillful in mounting and preparing specimens which had a bearing on his work and was a careful experimenter, keeping accurate records of all of his investigations.

At the time he was required to take the civil service examination in economic entomology he secured, among a number of applicants, the highest rating. He was employed at Washington, D. C., Brownsville, Tex., in California, and in Hawaii, but his principal work was on sugar-beet insects at Rocky Ford, Colo. He had temporarily resigned to take charge of his farm in New Jersey and was employed as a collaborator at the time of his death.



LIBRARY.

Miss Mabel Colcord, Librarian.

LIBRARY WAR SERVICE.

With the great increase in the size of our army comes a greatly increased demand for books for our soldiers and sailors. To meet this at least \$3,500,000 must be raised for Library War Service this fall. The Y.M.C.A., the Y.W.C.A., the War Camp Community Service, and the American Library Association are to unite in one big drive in November to raise funds for all four organizations. This is in accordance with the expressed desire of the War Department and of the Council of National Defense and represents also the earnest wish of the President. With its share of the funds about to be raised the A.L.A. plans to construct 12 large and 10 smaller library buildings at overseas camps, to add 10 large and 10 smaller new buildings to those in use in this country, to make additions to those already in use, to spend more than a million and a half in the purchase of additional books and magazines, and to expend for maintenance and equipment of the service, including these additions, another million and a half. All who are interested in any of these organizations are urged to contribute generously, for as the war approaches its climax the period right before us becomes by far the most critical and now is the time to render a significant service and to show our devotion to the cause.

NEW BOOKS.

- Anderson, John. The Nicholson observatory bee-hive and how to use it. Aberdeen, 1918. 15p.
- Chandler, A. C. Animal parasites and human disease. New York, 1918. 570p., illus. Pt. 1, Protozoa, p.26-125; Pt.2, "Worms", p. 196-321; Pt.3, Arthropods, p.322-528; Sources of information, p.529-533.
- Comstock, J. H. The wings of insects. Ithaca, N. Y., 1918. 430p., illus., 10 pl. Bibliography, p. 217-223.
- Dean, F.C., and Palmer, W.C. Editing the agricultural bulletin. Style book of the American Association of Agricultural College Editors. 1918. 4p.
- Fabre, J. H. The wonders of instinct, chapters on the psychology of insects. London, 1918. 320p., plates.
- Ferris, G.F. The California species of mealy bugs. Palo Alto, 1918. 78p., 3pl. (Leland Stanford Junior University publications. University ser.)
- Hegh, E. Comment nos planteurs et nos colons peuvent-ils se proteger contre les moustiques qui transmettent des maladies. Londres, 1918. (Belgium-Ministre des colonies. Service de l'agriculture. Etudes de biologie agricole No. 4.)
- Laveran, A. Leishmanioses, Kala-azar, Bouton d'Orient, Leishmaniose americaine. Paris, 1917. 515p., 5 pl.
- Pellett, F. C. Practical queen rearing. Hamilton, Ill., 1918. 103p., illus. U. S. Department of Agriculture. Library. Library notes No. 6. Bibliographical work, special indexes, directories and lists of publications in progress in the Department of Agriculture. May, 1918.
- A useful list of the bibliographical undertakings of the Department which are of rather general interest to the Department workers. U. S. Department of Agriculture. Library. Library Leaflets no.1-7. 1918. Chickens, Pigs, Sheep, Bread and cereals, Vegetables and fruits, Meat and meat substitutes, Fats and sugar. These leaflets aim to bring to the attention of the public the more important publications



of the Department on food production and food conservation and to show how to obtain these and other publications of like nature suggested by the Food Information Committee. Useful to extension workers and to public libraries.

U. S. Geological Survey. The publications of the U. S. Geological Survey (not including topographic maps). Washington, D.C., April, 1918. 185p.

U. S. Surgeon General's Office. Laboratory methods of the U.S. Army, compiled by the Division of Infectious Disease and Laboratories. Philadelphia, 1918. 256p. (Medical war manual No. 6.)

Vedder, E. B. Sanitation for medical officers. Philadelphia, 1917. 211p., il. (Medical war manual No. 1.)

Washburn, F. L. Injurious insects and useful birds. Philadelphia, 1918. 453p. (Lippincott's farm manuals.)

Winslow, C. E. A., and Lutz, Frank E. Insects and disease. New York, 1918. 73p., illus. (American Museum of Natural History. Guide leaflet No. 48.)

#### CEREAL AND FORAGE INSECT INVESTIGATIONS.

W. R. Walton, Entomologist in Charge.

Dr. L. O. Howard and Mr. W. R. Walton recently visited Boston for the purpose of attending the conference on the European corn borer, which occurred at the State House, Boston, Mass., on September 6. About 25 persons were in attendance, including the State entomologists and chief nursery inspectors of Massachusetts and contiguous States. The morning was spent in visiting a nearby infested field, and the afternoon was occupied by a discussion of the insect and plans for its control. Dr. H. T. Ferhald told of the discovery of the insect, and the inception of the present investigations. Stuart C. Vinal, of the Massachusetts State Agricultural College, outlined the results of his first year's biological and ecological work on the insect. D. J. Caffrey exhibited a map showing the local infestations and indicating the present geographical limits of the infested area, which now comprises about 300 square miles. The only practicable control seems to be winter burning of infested stalks, stubble, and dry vegetation. Plans were arranged for a vigorous control campaign after the closing of the present growing season.

H. M. Fort, formerly Special Field Agent located in Missouri, entered the Medical Corps of the Army as medical entomologist on September 13. The extensional activities of this branch of the Bureau have surrendered to the military and naval service ten men during the past five months. In ninety per cent of these cases it has not as yet been possible to replace them.

#### DECIDUOUS-FRUIT INSECT INVESTIGATIONS.

A. L. Quaintance, Entomologist in Charge.

Dr. A. L. Quaintance is now on a trip to the West visiting the following field stations attached to this office: Cleveland, Ohio, Benton Harbor, Mich., Portland and Medford, Oregon, and Sacramento and Fresno, Cal. He is expected to return about October 15.

W. D. Whitcomb, J. H. Boyd, and H. E. Spaulding have resigned to enter the National Army.

H. B. Peirson has resigned to return to college.



## FOREST ENTOMOLOGY.

A. D. Hopkins, Forest Entomologist.

Early this month Dr. A. G. Boving started on a tour of about two months of Illinois, Iowa, Idaho, Wyoming, Oregon, California, Arizona, Texas, Mississippi, and West Virginia, to give instructions to field men and to collect general biological data on Forest Coleoptera.

F. C. Craighead spent about a week in Philadelphia, Pa., and Lyme, Conn., in continuation of his studies of the locust borer and experiments in its control.

### Lachnids (Aphididae) Wanted.

Because they are of little consequence in the economy of these trees, our knowledge of the aphids on conifers, and particularly lachnids, either as regards classification or distribution, is very meager. Recent discovery by bee men, that honey made from the honeydew of coccids and aphids produced on pine trees is highly injurious to the bees, opened a new vista to the economic role of these insects. Consequently, it devolves upon forest entomologists and aphidologists to give these insects more intensive consideration henceforth. Quick results are highly desirable and a knowledge of geographical and host distribution is important. It is asked, therefore, that, whenever possible, entomologists collect and send to this Bureau, addressed to the Forest Entomologist, specimens of any aphids they may find at any time on any conifer at any place. Winged forms are more readily classified, but other forms will be welcome. Aphids are most satisfactorily sent in 75 to 80 per cent alcohol. Description of color patterns of living specimens is desirable but not indispensable.

## SOUTHERN FIELD-CROP INSECT INVESTIGATIONS.

W. D. Hunter, Entomologist in Charge.

T. E. Holloway has just returned from a very successful trip to Cuba where he went to obtain parasites of the sugar-cane borer (Diatraea saccharalis). He was successful in importing several hundred pupae of the parasite Euzenilliorhis diatraeae. His assistant, Mr. Barber, succeeded in rearing at least one generation of the parasites. A few lots of parasites have already been released in heavily infested cane fields in Louisiana.

R. H. Hutchison has returned to Washington from New Orleans, La., where he spent the summer in the investigation of lice and means for their eradication.

Miss Anna R. Frank, of Los Angeles, Cal., has been appointed scientific assistant for duty in Washington, D. C.

Lloyd P. O'Dowd has been appointed a field assistant for work at the sugar-cane insect laboratory in New Orleans, La.

## TRUCK-CROP INSECT INVESTIGATIONS.

F. H. Chittenden, Entomologist in Charge.

Work on the sweet-potato weevil during the growing season has partially given way to an inspection of the new-crop sweet potatoes at the loading platforms during the early harvest. Opportunity is being afforded also for continuation, under conditions applicable to freshly harvested tubers, of fumigation and heat-control experiments. The host-plant survey has already demonstrated



a considerable number of well-distributed additional wild food plants. Along this line, it has been found that an uninfested belt occurs in Florida on the seaside morning-glory north of Tarpon Springs and Ormond. Clean-up measures in Baker County have already yielded results in reducing the number of infested farms.

Oscar Barber, who has been engaged in sweet-potato weevil work in Texas, has accepted an appointment with the Office of Markets.

Frazier Rogers, who has been attached to the laboratory at Macclenny, Fla., has resigned to accept the position of Assistant Professor of Agronomy in the University of Florida.

A. E. Booth, who has been engaged in survey work in Florida, has resigned to enter private business.

D. R. Royder, who has been engaged in survey work in Texas, will enter the military service October 1.

K. W. Babcock, who has been employed as field assistant at Arlington, Va., during the summer, has resigned to reenter college.

K. E. Bragdon, who has been temporarily engaged in sweet-potato weevil work in Florida, has resumed his connection with the State Plant Board of Florida.

J. N. Lowe, who has been engaged in research work with the sweet-potato weevil in Texas, has resigned to accept a commission with the Sanitary Corps of the U. S. Army.

C. H. Arndt, who has been working at the Kingsville, Tex., station, has resigned to accept a fellowship in medicine.

Mancil B. Boyd, who has been engaged in the sweet-potato weevil survey in Florida, has resigned to enter private business.

H. L. Weatherby, who has been temporarily employed as inspector in Alabama, has resigned to resume educational work in Savannah, Ga.

#### BEE CULTURE.

E. F. Phillips, Apiculturist in Charge.

L. R. Watson has been appointed for cooperative extension work in Connecticut. He will give a course in beekeeping at the Agricultural College at Storrs in the fall, the remainder of the year to be devoted to extension work.

H. A. Scullen has been appointed for extension work in Washington, Oregon, Northern Idaho, and Montana.

George H. Vansell has resigned to return to his work in the University of Kentucky.

H. L. McMurray has been appointed for extension work in Wisconsin and Minnesota.

W. A. Smith has been appointed for extension work in Georgia in cooperation with the University of Georgia.

B. N. Gates, collaborator of this Bureau, has resigned his position at the Agricultural College of Massachusetts and has accepted the position of Provincial Apiarist of Ontario.

Arrangements are now practically completed for four extension schools for commercial beekeepers to be held at San Diego, Davis, Visalia, and Riverside, California, in cooperation with the Extension Division of the University of California beginning November 25. Each school begins at noon on Monday and closes Saturday afternoon, three sessions daily being scheduled. Messrs. Phillips and Demuth will go from Washington to participate in these schools. Instruction will also be given by Geo. A. Coleman of the University of California, Mr. M. A. Mendelson of Piru, Cal., and an extension specialist of this Bureau to be appointed. Additional special lectures will be given by Prof.



W. T. Clarke of the University, and by Messrs. E. R. Root and Frank C. Pellett. The course of study has been carefully arranged to cover the work which will be especially applicable to the production of honey on a large scale.

Before beginning work on this series of schools, Messrs. Phillips and Demuth will make a brief survey of certain undeveloped beekeeping territory in southern California with a view to having it utilized in 1919.

#### FEDERAL HORTICULTURAL BOARD.

C. L. Marlatt, Chairman.

The Chairman of the Board, accompanied by Mr. Sudworth, joined Mr. Hunter at Houston Tex., on September 16, for a week's survey of the pink bollworm work and the border quarantine service. The outstanding feature of the pink bollworm work, so far this season, is the fact that not a single pink bollworm egg, larva, or adult has been found within the quarantined districts, or elsewhere in Texas. This is a most encouraging indication of the efficiency of the clean-up of old cotton last fall and winter in these districts, and gives a very large ground of expectation for a successful outcome of this experiment. If this invasion of the pink bollworm in Texas is stamped out, it will be the largest successful entomological experiment of the kind in history. Active work is now in progress to see that no volunteer cotton develops during the growing season. The cotton-growing territory exterior to the quarantined districts is also being inspected. The outlaw cotton grown within the quarantined district about Trinity Bay will be safeguarded, and it is proposed to clean up these fields as thoroughly as the similar work was done last year. The car-fumigation houses on the Mexican border are practically completed and will be in operation as soon as the necessary machinery can be installed.

The Japanese beetle quarantine was promulgated September 24, effective June 1, 1919, and applies to a limited district in New Jersey opposite Philadelphia.

The European corn-worm quarantine was promulgated September 25, effective October 1, 1918, and applies to the restricted district including the City of Boston and near-by suburbs.